

CLAIMS

1. Device for the hot dip coating of metal strands (1), especially steel strip, in which the metal strand (1) can be guided vertically through a tank (3) that contains the molten coating metal (2) and through an upstream guide channel (4), wherein, in the area of the guide channel (4), an electromagnetic inductor (5) is installed, which can induce induction currents in the coating metal (2) for holding back the coating metal (2) in the tank (3) by means of an electromagnetic blocking field, which induction currents interact with the electromagnetic blocking field to exert an electromagnetic force, characterized by the fact that the inductor (5, 5a, 5b) is connected to electric supply means (6) that supplies the inductor with alternating current with a frequency (f) of less than 500 Hz.

2. Device in accordance with Claim 1, characterized by the fact that the frequency (f) is less than 100 Hz, and preferably is 50 Hz.

3. Device in accordance with Claim 1 or Claim 2, characterized by the fact that the supply means (6) supplies the

inductor (5) with single-phase alternating current.

4. Device in accordance with any of Claims 1 to 3, characterized by the fact that the inductor (5) has an induction coil (7) on either side of the guide channel (4).

5. Device in accordance with any of Claims 1 to 4, characterized by the fact that it has means (8) for guiding the metal strand (1) in the guide channel (4).

6. Device in accordance with Claim 5, characterized by the fact that the means (8) for guiding the metal strand (1) comprise at least one pair of guide rollers (8a), which are installed in the lower region of the guide channel (4) or below the guide channel (4).

7. Device in accordance with Claim 5, characterized by the fact that the means (8) for guiding the metal strand (1) comprise at least two correction coils (8b) for controlling the position of the metal strand (1) in the guide channel (4) in the direction (N) normal to the surface of the metal strand (1).

8. Device in accordance with Claim 7, characterized by the fact that the correction coils (8b) are arranged at the same height as the induction coils (7), as viewed in the direction of movement (X) of the metal strand (1).

9. Device in accordance with Claim 7 or Claim 8, characterized by the fact that the electromagnetic inductor (5, 5a, 5b) has two grooves (9), which run parallel to each other, perpendicularly to the direction of movement (X) of the metal strand (1) and perpendicularly to the normal direction (N), for holding the induction coil (7) and the correction coil (8b).

10. Device in accordance with Claim 9, characterized by the fact that the correction coil (8b) mounted in the grooves (9) is mounted closer to the metal strand (1) than is the induction coil (7).

11. Device in accordance with any of Claims 7 to 10, characterized by the fact that the inductor (5, 5a, 5b) has at least two correction coils (8b', 8b'', 8b''') arranged side by side in a row on either side of the metal strand (1).

REPLACED BY
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